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# YOUTH LEADERSHIP DEVELOPMENT AND PEER-LED INITIATIVES

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science at Virginia Commonwealth University.

by

KATHRYN CONLEY

Bachelor of Arts, Emory University, 2005

Master of Arts, Teachers College Columbia University, 2006

Director: Steven Danish, Ph.D.  
Professor, Department of Psychology

Virginia Commonwealth University  
Richmond, Virginia  
April 2009

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## Abstract

### YOUTH LEADERSHIP DEVELOPMENT AND PEER-LED INITIATIVES

By Kathryn Conley, M.A.

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science at Virginia Commonwealth University.

Virginia Commonwealth University, 2009

Major Director: Steven Danish, Ph.D.  
Professor, Department of Psychology

The current study explored the experiences of high school peer leaders ( $N = 45$ ) chosen to participate in an eight-week peer-led tobacco intervention program, Living Free of Tobacco, Plus! (LIFT+). The study used a repeated measures design to examine changes in leadership self-efficacy, perceived leadership skill, and goal-setting from baseline to post-test. Leaders' susceptibility to future tobacco use, self-efficacy to resist and avoid tobacco, and confidence and interest in following nutritional guidelines were also examined at two time points. To strengthen self-report measures, peer and teacher evaluations of observed leadership behavior were collected. Results suggest that



participation as a peer-leader in the LIFT+ program yielded several benefits. Leaders in the LIFT+ program reported a significant increase in interest in following nutritional guidelines, leadership self-efficacy, perceptions of leadership skill, and confidence in goal setting. Limitations and implications for future peer-led initiatives are discussed.

## Introduction

Leadership plays a highly valued role in our society. Kouzes and Posner (1995) view leaders as change agents charged with the important role of improving their communities. Leaders encourage us to act in socially responsible and beneficial ways and they inspire others to function at higher levels. According to Staub (1996), “leadership is the cultivation and liberation of meaningful power for self and others” (p.15). In other words, leaders guide others in realizing and maximizing their potential. It is through effective leadership that we can create positive change. Literature suggests that the ability to be a leader is not innate; rather, leadership skills and abilities can be learned and developed (Bennis & Nanus, 1985; Staub, 1996; van Linden & Fertman, 1998).

If we are to nurture future leaders, it is important to provide youth with opportunities to build and strengthen their leadership skills. By providing a young person with the opportunity for successful experiences as a leader, we can not only build competent communities (Iscoe, 1974), but can also facilitate the development of competent individuals by building their self-efficacy. Individuals with stronger leadership self-efficacy beliefs are more likely to seek out leadership roles than individuals with weaker leadership self-efficacy beliefs (Mellor, Bulger, & Kath, 2007). Additionally, a strong belief in one’s capability to lead will guide future thoughts, behaviors, and goals concerning leadership (Paglis & Green, 2002). Thus the aim of exposing young people to

leadership roles and experiences is to help them learn more about leadership and gain confidence in their ability to become leaders. With increased confidence, an individual will be more likely to engage in future leadership behaviors.

One way to provide youth with leadership experience is through the use of peer-led initiatives. Peer-led initiatives may take several forms including peer education, peer leadership, peer mentoring, peer support, peer counseling, peer mediation, youth service, cooperative learning, peer tutoring, cross-age tutoring, peer helping, and youth involvement (Bernard, 1991; Mellanby, Rees, & Tripp, 2000; Turner, 1999). In the broadest sense, these initiatives can be defined as youth leading youth – through education, support, or other helping behaviors. Peer-led initiatives provide youth with the opportunity to define, develop, and practice leadership skills. Peer-led initiatives also contribute to positive changes within our schools and communities and exponentially increase the available capacity of help-giving resources (Bernard, 1991; Tiven, 2002). The benefits of peer leadership programs flow in both directions. Peer initiatives provide youth with opportunities not only to learn and gain knowledge about themselves but to serve their communities as well (Bernard, 1991). The current study aims to explore the experiences of high school peer educators chosen to participate in an eight-week peer-led tobacco intervention program, Living Free of Tobacco, Plus! (LIFT+). The following chapter will review literature regarding leadership, peer initiatives and self-efficacy.

## Review of the Literature

### *Leadership Defined*

The study of leadership is difficult as there are “no generally accepted definitions of what leadership is, no dominant paradigms for studying it, and little agreement about the best strategies for developing and exercising it” (Hackman & Wageman, 2007, p. 43). Stogdill (1974) supports this view stating that, “there are almost as many definitions of leadership as there are persons who have attempted to define the concept” (p. 259). In addition, Winum (2003) reports that a recent literature search on google.com using the key word “leadership” yielded 9,450,000 references; “leadership development” produced 2,876,000 references. Amazon.com lists 12,538 books on the topic of leadership, and PsycLit and ABIInform lists over 5,200 published articles on leadership since 1968. Thus gaining a clear and solid understanding of leadership proves challenging.

Leadership experts have defined leadership in terms of group processes, personality characteristics, interpersonal and intrapersonal relationships, compliance, influence, particular behaviors, persuasion, power relations, goal achievement, interactions, motivation, communication patterns, and initiation of structure (Ricketts & Rudd, 2002). Despite a lack of consensus within leadership literature there are a few prominent definitions of leadership. In their book, *Leadership Challenge*, Kouzes and Posner (1995) assert that leadership is observable and learnable. They propose that there

are five fundamental practices that enable leaders to accomplish extraordinary things. Leaders must be willing to challenge the process, inspire a shared vision, enable others to act, model the way, and encourage the heart. In other words, leaders must be willing to take risks, be creative in problem solving, and search for new and better ways of doing things. Leaders also must have the ability to create and identify shared goals that enable others to see future possibilities. Most importantly, they must be passionate and enthusiastic about this vision, drawing in and inspiring others through their passion and enthusiasm. It is important that leaders encourage collaboration and empower others. Additionally, effective leaders must establish standards and values that are respected by others, create plans for reaching important goals, and live and act in ways consistent with their beliefs. Finally, leaders must provide encouragement and offer support.

Another view of leadership is the concept of the SuperLeader, or the leader of the 21<sup>st</sup> century, proposed by Mantz and Sims (2001). SuperLeadership describes a leadership that helps others to lead themselves. A SuperLeader has the ability to maximize the contributions of others by helping them to reach their potential. A SuperLeader leads others to lead themselves, tapping into each person's ability to create change. Further, a SuperLeader listens, asks questions, encourages problem solving by others, shares information, encourages creativity, encourages teamwork and collaboration, fosters independence and interdependence, and helps others set and work towards achieving realistic goals. Mantz and Sims (2001) suggest that "the effectiveness of leadership can be measured by the success of others" (p.3).

The Path Goal theory described by House and Dessler (1974; 1996) identifies four important features of leadership. This view suggests that effective leaders encourage others to meet their goals (achievement oriented), set expectations and initiate structure (directive behavior), maintain interpersonal relationships (supportive behavior), and incorporate others' ideas into the decision-making process (participative behavior).

Finally, a popular conceptualization of leadership is that of transformational leadership. Transformational leadership consists of four components: inspirational motivation, idealized influence, individualized consideration, and intellectual stimulation. Inspirational motivation involves “speaking optimistically and enthusiastically, articulating an inspiring vision, expressing confidence, and championing teamwork and high standards of performance” (Sosik, 2006, p. 38). Transformational leaders also display idealized influence, or pro-social and charismatic behaviors that earn trust and respect. Leaders use intellectual stimulation to encourage individuals to think in new ways and to solve problems differently. Finally, leaders use individualized consideration by treating others respectfully and with consideration of their unique needs, thus encouraging personal development. Transformational leaders search for new ways of working and are willing to change the way things are usually done. They have a motivation to lead, believe they will be successful as leaders, and relate well to others. Transformational leaders hold optimistic views about themselves and their environments.

### *Goal Setting*

Though the leadership theories described above vary, each theory identifies a leader's ability to inspire others to set and achieve goals to fully reach their potential as a

central aspect of leadership. Great leaders help others in creating visions of their best possible future. This vision of the future can inspire individuals to set goals for themselves. Inspiring others to set goals is significant because much of human behavior, motivation, and action are regulated by forethought and personal goal setting (Bandura, 1989). Additionally, one's sense of well-being depends on the ability to progress towards his or her goals. In other words, "people seek self-satisfaction from fulfilling valued goals" (Bandura, 1989, p. 1180). Thus the ability to set and achieve goals is highly valuable as goals provide meaning and purpose in life.

### *Youth Leadership*

The theories of leadership that inundate research literature are typically developed within an adult and/or organizational/managerial context (Edwards, 1994; Ricketts & Rudd, 2002). Some researchers apply these theories to the field of youth leadership while others suggest that the differences between youth leadership and adult leadership are significant and therefore require a different conceptualization (Roach, Wyman, Brooks, Chaves, Health, & Valdez, 1999). Youth leadership initiatives are expanding rapidly, thus research on youth leadership is particularly important. It is estimated that more than a half million high school leaders participate each year in some type of youth leadership programming. Despite this expanding youth leadership initiative, the field of youth leadership is not a common focus of educational theory and research; there is little focus on defining leadership within this context (Bass, 1981; MacNeil, 2006; Ricketts & Rudd, 2002; Roach et al., 1999).

As is the case with adult leadership, little consensus has been made among researchers on how to define or operationalize youth leadership. There is agreement, however, that youth leadership entails competency in both communication and interpersonal skills (Connor & Strobel, 2007; Zeldin & Camino, 1999). Van Linden and Fertman (1998) present a view of youth leadership that encompasses cognitive, emotional and behavioral aspects of leadership. This view describes leaders as individuals who “think for themselves, communicate their thoughts and feelings to others, and help others understand and act on their own beliefs” (p.17). Similarly, Tiven (2002) identifies effective leadership as the ability to influence others, the ability to encourage others to establish and achieve goals, having empathy toward the experiences and ideas of others, having a sense of purpose or direction and a vision, and a willingness to take risks in the face of challenges.

Conner and Strobel (2007) acknowledge that to be useful and meaningful the concept of youth leadership must be anchored in clear principles, yet stress their belief that leadership in youth presents itself differently in different contexts. Limiting ourselves to a single and static, perhaps narrow, definition of leadership potentially alienates those youth who do not fall within that definition. They suggest that a “broader more flexible conceptualization of leadership can play to different youth’s strengths, improving the likelihood that they will become engaged...in their communities in meaningful ways” (p. 294). The authors suggest that leadership is composed of three dimensions: communication and interpersonal skills, analytic and critical reflection, and positive community involvement. Communication and interpersonal skills can be promoted



through activities in which youth are encouraged to speak their minds, serve as group facilitators, and to work collaboratively with peers and adults. Analytic and critical reflection can be encouraged through journal exercises and group discussion.

While a flexible definition of youth leadership might be necessary, it is important that the conceptualization of leadership is not so broad that it becomes diluted and loses its meaning. Youth leadership may present itself differently in different contexts, but at its core, youth leadership involves connecting with others, making positive contributions to one's community, and most importantly, enabling others to reach and maximize their potential. These core concepts are similar to those of adult leadership, suggesting that perhaps the two conceptualizations of leadership are not all that different. It is important to note that youth leadership theories are similar to adult theories in that they emphasize the belief that leadership is not innate, rather is it something that can be learned, cultivated and developed (Bennis & Nanus, 1985; Staub, 1996; van Linden & Fertman, 1998).

Research suggests that there are a variety of factors necessary for the development of leadership abilities. In promoting the development of leadership, some youth development practitioners emphasize the importance of self-reflection, self-knowledge, and identity work (Mohammed & Wheeler, 2001; Nagle, 2003; van Linden & Fertman, 1998). Others point to the value of providing youth with opportunities to assert their voices, share their opinions and ideas, and participate in decision making (DesMarais, Yang, & Farzanehki, 2000; McLaughlin, 2000). More specifically, van Linden and Fertman (1998) propose three distinct stages of leadership development: awareness,

interaction, and mastery. During the awareness stage, youth begin to see themselves as leaders; they become aware of their leadership potential. The interaction stage involves student exploration where young people build and strengthen their leadership skills. Finally, the third stage involves student practice and mastery of leadership skills and concepts. These three stages fit within five dimensions of leadership: leadership information, leadership attitude, communication, decision making, and stress management (van Linden & Fertman, 1998). A young person progresses through each of the stages, building on experience and evolving his/her understanding of leadership. The young person progresses from not actively thinking about leadership, to reflecting upon his/her leadership potential, to seeking opportunities to exercise and improve leadership abilities. Ricketts and Rudd (2002) extend the above theory to include five stages of leadership development: comprehension, analysis, application, synthesis, and evaluation. These five stages fit within the following dimensions of leadership: leadership knowledge and information, leadership attitude, decision making, reasoning, and critical thinking, communication, and finally, interpersonal and intrapersonal relations.

Another model of youth leadership is the stage-based Leadership Identity Development Model described by Komives and colleagues (2006). This model consists of five categories that influence six stages of leadership identity development. These categories include broadening views of leadership, developing an awareness of self, group influences, developmental influences, and the changing views of self in relation to others. Movement through the stages of leadership identity formation depends upon an individual's experiences in the above categories. The six stages of leadership identity

development are: awareness of leadership, exploration of interests and engagement with others, leader defined as a position, leadership differentiation and leadership as a process, passion for commitments and care for the welfare of others, and finally, integration. At the end of this final stage an individual identifies himself/herself as a leader.

Although several theories attempt to identify and describe the necessary components of youth leadership development, perhaps the most important aspect is providing young people with the opportunities to exercise their leadership talents and abilities. Such opportunities allow youth to progress from learning about leadership to learning leadership. It is difficult for young people to develop an understanding of leadership and to see themselves as leaders without having an opportunity to practice it. Exposure to opportunities allows an individual to build his or her capacity or efficacy to engage in leadership. Leadership is learned by doing thus it is important to provide youth with the opportunity to “do” (MacNeil, 2006).

### *Peer Initiatives*

One way to provide youth with leadership experience is through the use of peer-led initiatives. As noted above, peer-led initiatives may take several forms including peer education, peer leadership, peer mentoring, peer support, peer counseling, peer mediation, youth service, cooperative learning, peer tutoring, cross-age tutoring, peer helping, and youth involvement (Bernard, 1991; Mellanby et al., 2000; Turner, 1999). In the broadest sense, these initiatives can be defined as youth leading youth – through education, support, or other helping behaviors.

Peer initiatives highlight the importance of seeing children and youth as individuals who can contribute to their families, schools, and communities (Bernard, 1991). Furthermore, “peer-led initiatives inherently acknowledge young people’s skills and abilities and their constructive role in the solution to social problems” (Turner, 1999, p.567). Utilizing students as peer leaders and educators can contribute to positive changes within our schools and communities and exponentially increase the capacity of available help-giving resources (Tiven, 2002; Bernard, 1991). It is widely acknowledged that the youth of today will be leaders of tomorrow. It is important to also acknowledge, however, that the youth of today can also be the leaders of today (Conner & Strobel, 2007).

The rationale for using peer initiatives relates to theoretical models of social influence, including Bandura’s model of social learning, and the concepts of social norms and social inoculation. The theory of social learning maintains that learning happens through the observation of behavior and the outcomes of those behaviors. Furthermore, the more a person identifies with a model, the more likely a person learns through observation (Bandura, 1988). This model identifies the impact of social influence on behavior and suggests that youth may have great strength in influencing their peers (Mellanby et al., 2000). A second important consideration in using peer initiatives, particularly for health promotion programs, is the potential to reach and impact larger populations. With the use of peer-led programs, interventions will reach both the target participants and the youth teaching the program, maximizing the impact of the program. With this larger influence the potential to shape the social norms of a community increases. The potential to influence social norms is supported through the peer cluster

theory developed by Oetting and Beauvais (1990). The peer cluster theory posits that adolescents engaging in risky behavior reach out and socialize with peers who also engage in risky behavior, forming a peer group. Such peer groups normalize this type of behavior making risky behavior acceptable. This theory then also highlights the equal importance of using peers to normalize healthy adaptive behavior, thus making pro-health behaviors accessible and acceptable.

### *Effectiveness of Peer-led programs*

Research highlights the effectiveness of peer initiatives. Two meta-analyses (Banger-Drowns, 1988; Tobler, 1986) evaluating hundreds of prevention programs and strategies found that “peer programs are dramatically more effective than all the other programs.” More recently, Mellanby and colleagues (2000) reviewed thirteen school-based health education programs comparing the effects of peer-led versus adult-led delivery of material. Results from this review suggest that peer leaders were at least, if not more, effective than adults in achieving the intervention’s desired outcome. Finally, Erhard (1999) found that many factors of a program, such as content, atmosphere, knowledge gain, satisfaction of program, and personal relationships were perceived more positively in peer-led programs compared to adult-led programs.

Peer initiatives have been particularly successful within the domain of health promotion. More specifically, peer-led programs have been used in areas of HIV prevention, smoking cessation, prevention of substance misuse, pregnancy prevention, and support for young people with chronic health problems (McCue & Afifi, 1996; Turner, 1999). Several studies have shown that peer initiatives can improve knowledge,

change attitudes regarding health related behavior, and improve self-esteem and self-efficacy among participants (Bernard, 1991; Turner 1991). In a study comparing adult-led and peer-led sex education programs, students in both conditions increased their knowledge of sexual health issues and tended to change their view to more conservative “norms.” The peer educators, however, were considerably more effective in establishing “conservative norms” whereas adult-led sessions were less effective in achieving the aims of the sessions (Mellanby, Newcombe, Rees, & Tripp, 2001). A review of several sexual health related peer intervention programs report significant intervention effects on adolescents’ HIV/AIDS-related knowledge, attitudes about risky behavior, self-efficacy, and resistance to negative peer pressure about use of condoms (Pearlman, Camberg, Wallace, Symons, & Finison, 2002). Finally, in the arena of substance use peer led initiatives have been found to increase health related knowledge relating to risk factors and pro-health behaviors, change attitudes toward the use of substances (Botvin, Baker, Renick, Filazzola, & Botvin, 1984; Botvin, Baker, Filazzola, & Botvin, 1990), delay the onset of smoking (Murray, Richards, Luepker, & Johnson, 1987), and reduce self-reported smoking and alcohol use (Botvin et al., 1984; Botvin et al. 1990; Perry, 1989; Telch, Killen, Cooke, & Maccoby, 1990). Thus the effectiveness of peer-led programs has been widely supported throughout the literature.

### *Benefits to Peer Leaders*

The benefits of peer-led programs extend beyond the participants. Peer-leaders receive substantial benefits from their participation in these initiatives. In fact, some studies argue that it is the peer educator who gains the most from the leading experience.

(Bernard, 1991). Peer leaders learn from the information they teach. Leahey and Harris, (2000) suggest that the best way to learn is to teach another person. This finding is reflected in the increased knowledge reported by peers leading initiatives. For example, results of a study evaluating the impact of a statewide, community-based peer-led HIV/AIDS education programs indicated that peer leadership was an effective strategy for increasing adolescent peer leaders' knowledge about HIV and confidence to be a change agent for HIV information. After participating as leaders in a peer-led program, young people were more knowledgeable and more confident in their roles as youth leaders for HIV prevention (Pearlman et al., 2002).

Peer-led programs offer a number of other benefits to leaders. They allow young people to develop communication skills (Drellishak, 1997; Gould & Lomax, 1993), make advances in moral judgment (Sprinthall & Scott, 1989), and develop empathy (Hahn & LeCapitaine, 1990; Kholer & Strain, 1990). They also have the potential to increase youth's self esteem (Kholer & Strain, 1990; Yogev & Ronen, 1982), the perception of control in their lives, and his or her sense of effectiveness (Tiven, 2002; Turner, 1999). These factors are especially important as they play a role in determining health related behaviors of young people (Cooper, Shaver, & Collins, 1998). Peer-led initiatives enable young people to maintain a healthy sense of self-esteem by providing opportunities to feel competent and successful (Turner, 1999). Peer leaders also experience a sense of membership, which allows them to feel connected to a larger whole (McGuire & Gamble, 2006); this sense of membership enhances their feelings of connectedness (Bernard, 1991). Being involved in peer initiatives can also increase a young person's sense of

efficacy, an important factor in psychological and social well-being (Crockett & Petersen, 1993). Moreover, these programs allow young people to experience the benefits of being in the helper role; what Reissman (1990) has called “the helper therapy principle.” These benefits include increased self-esteem from the knowledge that one has something to offer, decreased dependency, a sense of control that can be empowering and a feeling of social usefulness (Turner, 1999). Participation in peer-led programs also introduces important protective factors. The opportunity to participate in meaningful roles is considered by some researchers as perhaps the most important protective factor in preventing social problems like substance abuse, teen pregnancy, and delinquency (Rutter, 1979). Participation in meaningful experiences empowers young people and plays a critical role in prevention (Price, 1990). Additional benefits of providing youth with the opportunity to help include the emergence of a cultural norm of caring and helping (Bernard, 1991). Thus, it is clear that the benefits to leaders of peer initiatives are far reaching.

### *Leadership Opportunities*

Peer initiatives also provide youth with the opportunity to define, develop, and practice leadership skills. These skills include communicating effectively, providing support, providing direction, and helping others to express their ideas and recognize their goals. By participating in peer-led programs young people are likely to identify themselves as leaders and become more aware of their leadership potential. Leadership experiences are valuable as they allow youth to form supportive relationships and to experience their power to influence their schools and communities in positive ways.



Involvement in leadership opportunities can enhance a young person's self-esteem, confidence, social and intellectual competencies (MacNeil, 2006; Tiven, 2002).

Moreover, leadership skills have tangible benefits for adolescents approaching adulthood (Ricketts & Rudd, 2002). van Linden and Fertman (1998) found that employers seek out students with experiences in leadership roles. Further, six of the top seven skills desired by employers were leadership related. Thus, leadership skills will have importance beyond their participation in the initiative itself.

### *Self-Efficacy*

If we are to nurture future leaders, it is important to provide youth with opportunities to build and strengthen their leadership skills. Peer initiatives offer such opportunities. By providing a young person with the opportunity for successful leadership experiences, a youth's self-efficacy to be a leader is enhanced. Beliefs about capabilities are called self-efficacy beliefs. Self-efficacy has been applied across a number of domains such as academic achievement, career choice, and exercise (Pajares, 1994). Leadership is yet another domain in which self-efficacy is relevant.

Self-efficacy beliefs function as important determinants of thought, emotion, motivation and behavior (Bandura, 1994). Beliefs about our abilities influence the types of goals we set out to achieve. The higher the perceived self-efficacy the higher the goals people set for themselves and the firmer their commitment to these goals. Self-efficacy beliefs also influence the outcomes people expect their efforts to produce (Bandura, 2004); those with high self-efficacy anticipate success, while those low in self-efficacy anticipate failure. These beliefs affect motivation in terms of the effort one puts forth and

the duration of persistence in the face of obstacles. In other words, self-doubt lessens the amount of effort we put forth and our persistence in achieving personal goals (Bandura, 1994). Self-efficacy influences the amount of stress and anxiety an individual experiences as he or she engages in a challenging task. It also influences the level of accomplishment he or she realizes. Those with high self-efficacy view obstacles as challenges they are capable of overcoming whereas those low in self-efficacy may view obstacles as insurmountable (Bandura, 1986). Self-efficacy beliefs influence the choices people make and the courses of action they pursue; people engage in behavior in which they feel confident. A strong sense of self-efficacy enhances well-being and accomplishment in many ways. Individuals high in self-efficacy set goals, pursue challenges, and achieve personal accomplishment (Bandura, 1994).

There are four main sources of self-efficacy. First, the most effective way of establishing a high sense of self-efficacy is through successful “mastery experiences.” A second way of creating and strengthening self-efficacy is by observing others exert effort, persist, and ultimately achieve their goals; the greater the assumed similarity between the person and model, the stronger the influence of the model’s successes and failures. Social persuasion is another way of enhancing a person’s belief in his or her capabilities. Finally, emotional, psychological and physiological states, such as mood, anxiety, depression, and arousal, affect perceived self-efficacy (Bandura, 1994; Pajares, 1994).

### *Self-Efficacy and Leadership*

Self-efficacy plays an important role in leadership (McCormick, Tanguma, & Sohn, 2003). Individuals with stronger leadership self-efficacy beliefs are more likely to

seek out leadership roles than individuals with weaker leadership self-efficacy beliefs (Bulgar & Mellor, 1997). An individual who is more confident in his/her ability to lead will be more likely to take on leadership roles and expect positive outcomes. In other words, a strong belief in one's ability to lead, make an impact, and help others set and achieve goals functions as a powerful motivator for the pursuit of future leadership opportunities (Giles & Eyler, 1994). Further, the more efficacy-building opportunities a person has experienced, the greater his or her self-efficacy beliefs, which in turn, positively affects leadership performance. This relationship is supported by a study exploring the relationship among leadership self-efficacy, developmental experiences, and leadership behavior. Results suggest, consistent with self-efficacy theory, that there is a positive relationship between the number of previous leadership role experiences a person had and his or her leadership self-efficacy (McCormick et al., 2003). Because one's mastery experiences are the most influential source of self-efficacy, it is important for youth to be given the opportunity for such experiences to take place (Pajares, 1994).

## The Current Study

Typically changes in the participants of peer-led interventions have been the target of evaluation (McGuire & Gamble, 2006). The current study, however, focuses on the experiences of high school peer educators chosen to participate in an eight-week peer-led tobacco intervention program, Living Free of Tobacco, Plus! (LIFT+). Specifically, this study is interested in assessing LIFT+ as a potential medium for youth leadership development. The current study examined the peer leaders' self-efficacy to resist and avoid tobacco use, interest and confidence in following nutritional guidelines, tobacco susceptibility, perceived leadership skills, perceived leadership self-efficacy, and goal setting among leaders.

### *Hypotheses*

Hypothesis 1a: Leaders taught participants skills to avoid tobacco use. Because teaching is one of the best ways to learn (Leahey & Harris, 2000), it was hypothesized that after participating in the program leaders' self-efficacy with regard to resisting and avoiding tobacco would increase significantly.

Hypothesis 1b: Leaders emphasized the importance of healthy eating. Therefore, it was hypothesized that leaders' interest in following nutritional guidelines would significantly increase from pre- to post- intervention. It was also hypothesized that their confidence in eating more fruits and vegetables each day would significantly increase.

Hypothesis 1c: Leaders' susceptibility to tobacco use, smoking and chewing tobacco/snuff, would significantly decrease from pre- to post-intervention.

Hypothesis 2: Leaders learned important leadership skills during training and were given the opportunity to practice and refine these skills throughout an eight-week program. It was hypothesized that perceived leadership skills and leadership self-efficacy would significantly increase after participating in the program.

Hypothesis 3a: It was hypothesized that teacher evaluations of leadership behavior would significantly increase from pre- to post-test.

Hypothesis 3b: It was hypothesized that leaders' confidence ratings related to their perceived leadership ability at post-test would have a significant positive correlation with peer evaluations of leadership behavior.

Hypothesis 3c: It was hypothesized that leaders' confidence ratings related to their perceived leadership ability at post-test would have a significant positive correlation with teacher evaluations of leadership behavior.

Hypothesis 4: Successful experiences are a primary source of high self-efficacy beliefs. Thus, it was hypothesized that positive ratings of the LIFT+ experience would have a significant positive correlation with leadership self-efficacy at post-test.

Hypothesis 5: Because self-efficacy beliefs affect future behavior, it was predicted that higher leadership self-efficacy scores at post-test would have a significant positive correlation with the leader's intention to pursue future leadership experiences.

Hypothesis 6: The importance of goal-setting was highlighted in the LIFT+ program. Leaders taught participants goal setting skills, thus it was hypothesized that the goal setting confidence of the leaders would increase significantly.

## Methods

### *Living Free of Tobacco, Plus*

LIFT+ is a peer-led, eight session school based health promotion program. It is a theory-based program emphasizing the impact of social influences and self-efficacy beliefs on health behaviors such as youth tobacco use. The program includes tobacco, nutrition, and family intervention components. This was the second year of program implementation. Two schools received the program and two schools functioned as control schools. Approximately 600 seventh graders and 45 high school leaders participated in the program.

### *Leader Training*

Before the start of the intervention, high school leaders participated in a two-day training session. The LIFT+ training program was interactive and included a multi-media format of power point presentation, video clips, games, and a leader manual. The first section of the leader manual was dedicated to principles of effective leadership and was based on the Going for the Goal Program (Danish, 2002). Trainers and leaders discussed effective ways to teach skills, encourage discussion, and manage a group. Trainers also highlighted the importance of using effective verbal and nonverbal communication and providing feedback. In the second section of the manual, leaders learned the details of group introduction and specifics with regard to each of the eight lessons. They were taught the importance of setting goals and were provided with a list of questions aimed at

encouraging the participants to explore their best possible futures. At the end of training leaders had the opportunity to break up into teaching groups, prepare a portion of the LIFT+ workshop and present it in front of their fellow peer leaders. After presenting the workshop, leaders were offered helpful feedback. This approach had proved successful with other peer-led programs developed at the Life Skills Center.

#### *Leader Recruitment and Selection*

LIFT+ staff worked with the schools to help select peer leaders. It was advised that students chosen as leaders be relatively strong academically, be of outstanding character, in good health, and participate in extra-curricular activities. One school required its nursing class to participate in the program while the guidance counselor selected leaders from the other school. All leaders met the schools' selection criteria. The leaders were provided with transportation to and from the middle schools where the programs took place. They also received community service credit for their participation in the program.

#### *Participants*

Participants included 45 high school leaders selected from two rural high schools in Virginia. Leaders were selected based on criteria set by each high school.

#### *Measures and Procedure*

All leaders were assessed at pre- and post- intervention. Self-report questionnaires were administered by trained research staff using standardized protocols. Leaders were asked to rate the leadership behaviors of their co-leaders at post-intervention. Teachers



provided evaluations of student leaders' leadership behaviors at both pre- and post-intervention.

*Self-Efficacy Beliefs Concerning Tobacco Use* (Appendix A; Items 54 - 55). Self-efficacy to resist tobacco use was measured using the single item "If I did not want to smoke, I could refuse someone's offer of cigarettes or other tobacco products." Five response choices ranged from "Strongly Disagree" to "Strongly Agree." Similarly, self-efficacy to avoid smoking was measured using the single item, "If I decided not to smoke, I am sure I could avoid smoking." Responses ranged from 1 "Strongly Disagree" to 5 "Strongly Agree."

*Interest and Confidence in Following Nutritional Guidelines* (Appendix A; Items 71 - 72). Interest in following national recommendations for eating fruits and vegetables was assessed using the single item, "How interested are you in following the national recommendations for eating fruits and vegetables?" Five responses ranged from "Not at all interested" to "Very interested." Confidence in eating more fruits and vegetables was assessed using the single item "How confident are you that you could eat more fruits and vegetables each day?" Five responses ranged from "Not at all confident" to "Very confident."

*Susceptibility to Tobacco Use* (Appendix A; Items 37- 44). Pierce (1996) categorizes adolescents into four categories with regard to smoking behavior: established smokers, experimenters, susceptible never-smokers, and non-susceptible never-smokers. Adolescents who have puffed or smoked a whole cigarette are classified as experimenters, whereas those who have smoked 100 cigarettes in their lifetime are

classified as established smokers. Adolescents who have never smoked can be classified as susceptible never-smokers or non-susceptible never-smokers. The distinction between susceptible and non-susceptible never smokers depends upon how individuals answer three questions about future smoking intentions. These questions include, “Do you think that you will smoke cigarettes soon?” “If one of your best friends were to offer you a cigarette would you smoke it?” and “Do you think you will smoke a cigarette in the next year?” Four responses ranged from “Definitely Not” to “Definitely Yes.” To be classified as a non-susceptible never smoker, the adolescent needed to respond “Definitely Not” to all three questions. Susceptibility to chewing tobacco/snuff was assessed similarly.

*Leadership Skills* (Appendix B; Section A, Items 1-16). Perceived leadership skills were assessed using a survey created for a previous study evaluating leadership (Hogan, 1995). The 16 item survey asked peer-leaders to indicate the degree to which they felt confident about their leadership skills; responses ranged from 1 “Strongly Disagree” to 7 “Strongly Agree.” The first 6 items focused on skills related to helping others set goals for themselves; a skill that is critically important in being an effective leader (Danish, 1997; Mantz & Sims, 2000). For example, “I am good at helping others set goals for themselves,” and “I am good at building the confidence of other people so that they can reach their goals.” The next 10 items focused on other important skills such as speaking, listening and helping others. For example, “I am good at encouraging others to share what they have learned”, and “I am good at listening to other people’s ideas.” The mean scale score was computed by summing all items and dividing by 16; higher

scores indicated greater perceived leadership skills. Cronbach's alpha ranged from .84 to .94.

*Goal Related Behaviors* (Appendix B; Section B, Items 1-5). Goal related confidence was measured using 5 item survey created for a prior study on goal setting (Hogan, 1995). The survey focused on an individual's goal setting ability and use of goal setting behaviors in his or her own life. Items included statements such as "I set goals for myself often," "I am good at developing a plan to reach goals I have set for myself," and "I set goals for myself in many different areas in my life." Responses ranged from 1 "Strongly Disagree" to 7 "Strongly Agree." The mean scale score was computed by summing all items and dividing by five; higher scores indicated greater goal setting confidence. In a previous study, cronbach's alpha coefficient was .81(Papacharisis, Theofanidis, & Danish, 2007). In the current study, cronbach's alpha ranged from .88 to .93.

*Leadership Self-Efficacy* (Appendix B; Section D, Items 1-4). A four item survey was created to measure leadership self-efficacy. According to Bandura (1997), "self-efficacy beliefs should be measured in terms of particularized judgments of capability" (p.6). In other words, self-efficacy is best measured by statements of capability. Further, efficacy beliefs should be measured at specific levels for the particular domain – these specific beliefs combine to assess a general domain (Pajares, 1994). The survey created for this study was based upon the above principles. Three items were related to specific factors of leadership deemed important by several theories of leadership. The first item was related to goal direction, "I know that I can help other people to develop a plan to

reach their goals.” The second item was related to providing direction, “I know that I can lead a group of people.” And the third item was related to interpersonal communication, “I know that I can listen to other people’s ideas.” The fourth item was a more global statement of leadership ability, “I know that I can be a good leader.” Five responses ranged from 1 “Strongly Disagree” to 5 “Strongly Agree.” The mean scale score was computed by summing all items and dividing by four; higher scores indicated greater leadership self-efficacy. Other research has also used only a few items to measure leadership self-efficacy (Singer, 1990; Mellor et al., 2007). Cronbach’s alpha ranged from .72 to .82.

*Experience as Leader* (Appendix C; Section E, Items 1-3). Three items on the post-test were designed to further evaluate the leaders’ perceptions of their experience as peer-educators. Peer leaders were asked to indicate how much they agreed or disagreed with the following statements, seven responses ranged from 1 “Strongly Disagree” to 7 “Strongly Agree”: “I intend to pursue future leadership opportunities,” “I learned from my experience as a LIFT+ leader” and “My experience as a LIFT+ leader was positive.”

*Response Shift Bias* (Appendix C). Pre-Post test designs are sensitive to response-shift bias. Response-shift bias is defined as “a treatment produced change in a subject’s awareness or understanding of the variable being measured” (Howard, 1981, p. 320). This may happen when a person’s awareness and understanding of leadership skills changes after being involved in leadership experience (Howard, 1982). This change in understanding may affect prior evaluation of skills. Thus, an alternative method to measuring change is to replace a traditional pre-test with retrospective pre-test ratings

obtained at the time of the post-test. Because post- and retrospective- evaluations are made at same point in time, it is likely that both are made from same perspective and free of response-shift bias.

*Peer Evaluations of Leadership Behavior* (Appendix D). Leaders were divided into groups of three. Each group was responsible for teaching the workshops to a 7<sup>th</sup> grade class. At the end of the LIFT+ program, leaders were asked to evaluate their co-leaders' leadership behaviors over the past eight weeks. Specifically, the leaders indicated how often they observed certain behaviors related to leadership. The survey consisted of 16 items and included statements such as "My co-leader helped others set goals for themselves" and "My co-leader listened to other people's ideas"; response choices ranged from 1 "Never" to 5 "Always." Peer evaluations were averaged and each leader received one peer evaluation score. Cronbach's alpha was .94.

*Teacher Evaluations of Generalized Leadership Behavior* (Appendix E). Teachers from each high school were asked to complete a short survey for each of the student leaders. The teacher selected to complete the survey had observed and/or worked with each of the students fairly regularly. Teachers were asked to indicate how often they observe certain behaviors related to leadership in the classroom setting. The survey consisted of 7 items and included statements such as "The student helps others set goals for themselves" and "The student listens to other people's ideas"; response choices ranged from 1 "Never" to 5 "Always". The survey was completed both at pre-test and post-test. Cronbach's alpha ranged from .85 to .89.

## Results

### *Sample Characteristics*

The sample consisted of 32 females and 13 males, with a mean age of 16.6 ( $SD = .716$ , Range 15 – 18). Most of the leaders identified themselves as Caucasian (82.2%) and the remaining (17.78%) identified themselves as African-American. See Table 1 for sample characteristics.

Several leaders (56.82%) reported that they had puffed a cigarette. Fewer reported that they had smoked a whole cigarette (40.9%) or smoked 100 cigarettes (9.1%). Only nine leaders (20.45%) reported that they had ever tried chewing tobacco. Information about leaders' nutritional intake was also collected. See Tables 2 and 3 respectively.

Table 1

### *Sample Characteristics*

Variable	<i>N</i>	%
Sex		
Male	13	28.9%
Female	32	71.1%
Ethnicity		
Caucasian	37	82.2%
African-American	8	17.8%

Table 2

*Leaders' Tobacco Use*

Variable	<i>N</i>	%
Tobacco Use		
Puff	25	56.8%
Whole Cigarette	18	40.9%
100 Cigarettes	4	9.1%
Chew	9	20.45%

Table 3

*Weekly Fruit and Vegetable Intake at Pre-Test*

	Vegetable Intake	Fruit Intake
<i>In the last 7 days</i>	Pre-Test <i>n</i> (%)	Pre-Test <i>n</i> (%)
No servings	--	--
1-3 servings	11 (28.2%)	16 (41.03%)
4-6 servings	8 (20.5%)	8 (20.5%)
1 serving/day	5 (12.82%)	2 (5.1%)
2 servings/day	7 (17.9%)	8 (20.5%)
3 servings/day	6 (15.4%)	3 (7.7%)
4+ servings/day	2 (5.1%)	2 (5.1%)

*Preliminary Analyses*

SAS 9.1 was used in all analyses. First, the data were screened for missing responses. Individual mean substitutions were used for participants with missing data on items from peer evaluations ( $n = 10$ ) and teacher evaluations ( $n = 2$ ). Of the 45 leaders who completed baseline measures, only 40 completed measures at post-test. Independent

samples t-tests were used to examine data for differences between those who had completed measures at post-test and those who had not on demographic and outcome variables. No significant differences were found ( $ps > .05$ ) and the participants were removed from the analyses. Next, data were examined for outliers. An examination of standardized scores revealed three outliers ( $z$  scores  $> 3.29$ ) for leadership self-efficacy, confidence in eating more fruits and vegetables, and positive experience. However, the outliers were retained as they were better explained by non-normality of the variables than by extreme values. Normality diagnostics revealed that the variable confidence in eating more fruits and vegetables was not normally distributed, (skewness = - 1.2, kurtosis = 4.5). Despite this violation in the assumption of normality, the data were used in the analyses. The implications of this decision will be addressed in a discussion of study limitations. Data for self-efficacy to lead (skewness = - 1.9, kurtosis = 4.0) and positive experience (skew = -1.8, kurtosis = 2.8) collected at post-test also violated assumptions of normality. Consequently, statistical tests that allow for violations of normality were employed.

#### *Hypothesis 1a*

It was hypothesized that participation in the LIFT+ program would increase the leaders' self-efficacy with regard to resisting and avoiding tobacco. The data collected were not normally distributed which precluded the use of appropriate analyses to determine significant differences in mean scores between time points, (refuse smoke, skewness = - 4.1, kurtosis = 20.1; avoid smoke, skewness = -2.7, kurtosis = 7.9). However, important information can be obtained by examining the frequencies at each



time point. At baseline, when asked if they could refuse someone's offer of tobacco (cigarettes or chew), 32 leaders answered that they strongly agreed, six leaders agreed, and only one leader strongly disagreed ( $M = 4.7$  of 5,  $SD = .72$ ). Similarly, at post-test 33 leaders strongly agreed, three agreed, and only one leader strongly disagreed ( $M = 4.8$  of 5,  $SD = .70$ ). At baseline, when asked if they could avoid smoking if they wanted to, 30 leaders strongly agreed, six leaders agreed, one leader was unsure, and only one leader disagreed ( $M = 4.8$  of 5,  $SD = .94$ ). At post-test, 34 leaders strongly agreed that they could avoid smoking, two leaders agreed, and only one leader disagreed ( $M = 4.9$  of 5,  $SD = .54$ ).

#### *Hypothesis 1b*

It was hypothesized that after participating in the program leaders would report increased confidence in eating more fruits and vegetables each day and would express greater interest in following nutritional guidelines. PROC MIXED was used to determine significant differences in nutritional interest and confidence between time points. A random effects statement added to the model accommodated the nested nature of the data (leaders within schools). Leaders expressed significantly greater interest in following nutritional guidelines from baseline ( $M = 3.3$  of 5,  $SD = 1.03$ ) to post-test ( $M = 3.9$  of 5,  $SD = 0.80$ ),  $t(74) = 3.13$ ,  $p < .05$ . Leaders also expressed greater confidence in their ability to follow nutritional guidelines from baseline ( $M = 4.2$  of 5,  $SD = 0.82$ ) to post-test ( $M = 4.5$  of 5,  $SD = .61$ ); however this change in confidence was not statistically significant,  $t(72) = 1.68$ ,  $p > .05$ . Examination of frequencies reveals that, at baseline, five leaders were either not confident or unsure that they could eat more fruits and vegetables

each day. At post-test, however, only two leaders were unsure that they could eat more fruits and vegetables, while the remaining leaders were somewhat confident or very confident. See Table 4.

### *Hypothesis 1c*

It was hypothesized that leaders' susceptibility to tobacco use, smoking and chewing tobacco/snuff, would decrease from pre- to post- intervention. Pierce (1996) categorizes adolescents into four categories with regard to smoking behavior: established smokers, experimenters, susceptible never-smokers, and non-susceptible never-smokers. At baseline, three leaders were identified as established smokers, while 17 leaders were identified as experimental smokers. Of those who had never smoked ( $n = 17$ ), six leaders qualified as susceptible never-smokers and the remaining were classified as non-susceptible never smokers. At post-test, two of the leaders who were previously classified as susceptible never-smokers became non-susceptible never-smokers.

With regard to chewing tobacco, only seven leaders had tried chewing tobacco at baseline, whereas 31 leaders had not. Of those who had not tried chewing tobacco, one leader could be identified as susceptible to future chewing tobacco use. At post-test, the one leader who had previously been classified as susceptible qualified as non-susceptible, while two leaders who were previously classified as non-susceptible were identified as susceptible.

### *Hypothesis 2*

It was hypothesized that participation in the program would increase leaders' perceived leadership skills and leadership self-efficacy. PROC MIXED was used to

assess significant differences in leadership self-efficacy and perceived leadership skill across time points. A random effects statement added to the model accommodated the nested nature of the data (leaders within schools). To address possible response shift bias (Howard, 1981), leaders' retrospective baseline scores were used in the analyses. Because leaders' sex had a significant effect on leadership skill ( $F(1, 75) = 20.24, p < .0001$ ) and leadership self-efficacy ( $F(1, 75) = 32.3, p < .0001$ ), it was entered into the models as a covariate. Leaders reported a significant increase in their perception of leadership skills from retrospective baseline ( $M = 5.5$  of 6,  $SD = .86$ ) to post-test ( $M = 6.2$  of 7,  $SD = .68$ ),  $t(75) = 4.5, p < .0001$ . Leaders' leadership self-efficacy also increased significantly from retrospective baseline ( $M = 4.0$  of 5,  $SD = .62$ ) to post-test ( $M = 4.7$  of 5,  $SD = .45$ ),  $t(75) = 5.7, p < .0001$ . See Table 4.

#### *Hypothesis 3a*

It was hypothesized that teacher observations of leadership behavior would increase from pre- to post- intervention. PROC TTEST was used to perform a paired samples t-test to determine significant mean differences in teacher evaluations of leadership from pre-test to post-test. There was a significant increase in teacher observations of leadership from baseline ( $M = 3.5$  of 4,  $SD = .67$ ) to post-test ( $M = 3.7$  of 4,  $SD = .68$ ),  $t(39) = 2.5, p = .016$ .

#### *Hypothesis 3b*

It was hypothesized that leaders' confidence ratings related to their perceived leadership skill at post-test would be positively correlated with peer evaluations of observed leadership behavior. PROC CORR was used to examine the relationship

between self-ratings of leadership ability at post-test and peer evaluations of leadership. There was a significant moderate positive correlation between the two variables,  $r = .345$ ,  $p < .05$ , with higher self-ratings of leadership ability associated with higher peer evaluations of leadership. See Table 5.

#### *Hypothesis 3c*

It was hypothesized that leaders' confidence ratings related to their perceived leadership skill will be positively correlated with teacher evaluations of observed leadership behavior. PROC CORR was used to assess relationship between leaders' ratings of perceived leadership ability and teacher ratings of perceived leadership behavior. At baseline, there was not a significant correlation between the two variables,  $r = .061$ ,  $p = .71$ . Similarly, there was not a significant correlation between the two variables at post-test,  $r = -.014$ ,  $p = .93$ . See Table 5.

#### *Hypothesis 4*

It was hypothesized that positive ratings of the LIFT+ experience would be positively correlated with leadership self-efficacy at post-test. PROC CORR was used to explore the relationship between positive experience and leadership self-efficacy at post-test, while controlling for leadership self-efficacy scores at baseline. Preliminary analyses revealed violations of normality for leadership self-efficacy at post-test, thus a partial spearman correlation was used to assess the relationship between the two variables. There was a significant positive partial correlation between positive experience and leadership self-efficacy at post-test, controlling for self-efficacy scores at baseline,  $r = .49$ ,  $p < .01$ ,

with high ratings of positive experience being associated with higher leadership self-efficacy. See Table 5.

#### *Hypothesis 5*

It was hypothesized that higher leadership self-efficacy scores at post-test will be positively related to the leader's intention to pursue future leadership experiences. PROC CORR was used to explore the relationship between intention and leadership self-efficacy at post-test, while controlling for leadership self-efficacy scores at baseline. Preliminary analyses revealed violations of normality for leadership self-efficacy at post-test, thus a partial spearman correlation was used to assess the relationship between the two variables. There was a significant positive partial correlation between intention and leadership self-efficacy, controlling for self-efficacy scores at baseline,  $r = .52, p < .001$ , with higher leadership self-efficacy associated with greater intentions to pursue leadership opportunities. See Table 5.

#### *Hypothesis 6*

It was hypothesized that the goal setting confidence of the leaders would increase from pre- to post- intervention. PROC MIXED was used to assess significant differences in goal setting skills across time points. A random statement included in the model accommodated the nested nature of the data (leaders within schools). To address possible response shift bias (Howard, 1981), leaders' retrospective baseline scores were used in the analyses. Leaders' goal setting confidence increased significantly from retrospective baseline ( $M = 5.2$  of 7,  $SD = 1.05$ ) to post-test ( $M = 6.0$  of 7,  $SD = .88$ ),  $t(76) = 3.8, p < .001$ . See Table 4.

Table 4

*Changes in Outcome Variables from Pre-Test to Post-Test*

Variable	Pre-Test <i>M (SD)</i>	Post-Test <i>M (SD)</i>	<i>p</i> value
Interest in Nutrition	3.3 (1.03)	3.9 (.80)	< .05
F& V Confidence	4.2 (.82)	4.5 (.61)	> .05
Leadership Skill*	5.5 (.86)	6.2 (.68)	< .01
Leadership S-E*	4.0 (.62)	4.7 (.45)	< .01
Goal Setting*	5.2 (1.05)	6.05 (.88)	< .01

Note: \* Denotes use of retrospective baseline data. Leadership SE is leadership self-efficacy. *N* = 40.

Table 5

*Correlations Among Outcome Variables*

Variable	Lead S-E Post-	Lead Skill Pre-	Lead Skill Post-
Teach Eval Pre-	--	.061	--
Teach Eval Post-	--	--	-.014
Peer Eval	--	--	.35*
Positive	.49*	--	--
Intention	.52*	--	--

Note: Spearman partial correlation used to evaluate relationship between leadership self-efficacy at post-test and positive experience and intention to pursue future leadership opportunities, while controlling for leadership self-efficacy at baseline. Leadership SE is leadership self-efficacy. \*  $p < .05$

*A Comparison of Baseline and Retrospective Baseline Data*

It was hypothesized that leaders' awareness and understanding of leadership and goal setting would change after participating in the LIFT+ program (Howard, 1982).

Given this shift in understanding, retrospective evaluations were used to avoid the

potential effects of response-shift bias. A comparison of retrospective baseline and baseline evaluations revealed potential response-shift bias. For the leadership self-efficacy variable there was a significant difference in mean scores from baseline ( $M = 4.4$  of 5,  $SD = .42$ ) to retrospective baseline ( $M = 4.0$  of 5,  $SD = .62$ ),  $t(38) = 4.44$ ,  $p < .001$ . Similarly, leaders' confidence in goal setting was significantly different from baseline ( $M = 5.6$  of 7,  $SD = .90$ ) to retrospective baseline ( $M = 5.2$  of 7,  $SD = 1.05$ ),  $t(39) = 2.61$ ,  $p < .05$ . Leadership skill was not significantly different,  $t(39) = 1.68$ ,  $p > .05$ , from baseline ( $M = 5.7$  of 7,  $SD = .59$ ) to retrospective-baseline ( $M = 5.5$  of 7,  $SD = .86$ ).

#### *Changes in Nutrition*

Self-reported changes in weekly fruit and vegetable intake were observed.

Overall, leaders reported increased fruit and vegetable intake. See Table 6.

Table 6

#### *Weekly Fruit and Vegetable Intake at Pre-Test and Post-Test*

<i>In the last 7 days</i>	Vegetable Intake		Fruit Intake	
	Pre-Test <i>n</i> (%)	Post-Test <i>n</i> (%)	Pre-Test <i>n</i> (%)	Post-Test <i>n</i> (%)
No servings	--	1 (2.7%)	--	--
1-3 servings	11 (28.2%)	7 (18.92%)	16 (41.03%)	7 (18.9%)
4-6 servings	8 (20.5%)	6 (16.2%)	8 (20.5%)	10 (27%)
1 serving/day	5 (12.82%)	1 (2.7%)	2 (5.1%)	3 (8.1%)
2 servings/day	7 (17.9%)	5 (13.51%)	8 (20.5%)	3 (8.1%)
3 servings/day	6 (15.4%)	8 (21.6%)	3 (7.7%)	8 (21.6%)
4+ servings/day	2 (5.1%)	9 (24.3%)	2 (5.1%)	6 (16.2%)

#### *Perception of the Program*

The majority of leaders (69.23 % ) strongly agreed that they would rate their experience as positive, 20.51% moderately agreed, 7.39% mildly agreed, while 2.56% ( $n = 1$ ) neither agreed nor disagreed that the program was a positive experience. With regard to learning from the program, 64.1% of leaders strongly agreed that they learned from the program, 17.95% moderately agreed, 15.38% mildly agreed, and 2.56% neither agreed nor disagreed ( $n = 1$ ) that they learned from the experience. At the end of program, 43.6% of leaders strongly agreed that they intend to pursue leadership opportunities, 30.77% moderately agreed, 15.38% mildly agreed, and 10.26% ( $n = 4$ ) were unsure of their intentions to pursue future leadership opportunities.



## Discussion

Research highlights the effectiveness of peer-led initiatives, particularly within the field of health promotion (McCue & Afifi, 1996; Turner, 1999). The purpose of the current study was to evaluate the effects of a peer-led intervention on its leaders. Specifically, the author was interested in answering the question: Does the LIFT+ program function as a means to increase peer-leaders' self-efficacy to lead as well as their perceptions of leadership skill and goal setting ability? Additional outcomes were also of interest, including self-efficacy to resist and avoid tobacco use, susceptibility to future tobacco use, and confidence and interest in following nutritional guidelines.

Overall, participation as a peer-leader in the LIFT+ program yielded several benefits. These findings are consistent with research that identifies peer-led interventions as beneficial to both participants and peer-leaders (Bernard, 1991; Turner 1991). Leaders in the LIFT+ program reported increased interest and confidence in following nutritional guidelines and increased fruit and vegetable intake. Leaders also reported increased leadership self-efficacy, perceptions of leadership skill, and confidence in goal setting. Participation in LIFT + was an experience that most leaders learned from and considered positive. After participating in the eight-week program most leaders reported that they intended to pursue future leadership opportunities. A more detailed summary and discussion of the findings follows.

*Nutrition and Self-Efficacy to Resist and Avoid Tobacco Use*

The first three hypotheses concerned leaders' perceived ability to resist and avoid tobacco, susceptibility to smoking, and interest and confidence in following nutritional guidelines. At the start of the intervention, nearly all leaders (97.7%) either strongly agreed or agreed that they were capable of resisting and avoiding tobacco. This high mean score and limited variability made it difficult for ratings of self-efficacy to increase from pre- to post- test. Leaders' perceptions of their high ability to resist or avoid tobacco use are interesting when considering the prevalence of tobacco use among this sample (See Table 1). Suggesting that despite their perceived capabilities to resist and avoid tobacco use, several leaders still chose to smoke or chew tobacco. An alternative explanation may be that leaders over-estimate their ability to resist and avoid tobacco. This explanation is consistent with literature that suggests adolescents tend to overestimate their ability to resist and avoid risky behavior, which would include tobacco use (Botvin, 1984; Cohn, Macfarlane, Yanez, & Imai, 1995).

The program highlighted the benefits of healthy eating. As expected, leaders expressed greater interest in following nutritional guidelines after participating in the program. Leaders also expressed greater confidence in eating more fruits and vegetables; however, this increase in confidence was not statistically significant. The limited variability in confidence scores at baseline made it difficult to interpret significant changes from pre-to post-test. Before the start of the intervention, few leaders reported eating four or more fruits and vegetables per day in the last week, 5.1% and 5.1% respectively. After the intervention however, 24.3% of the leaders reported eating four or more vegetables per day in the last week while 16.2% reported eating four or more fruits

per day. This increase in self-reported fruit and vegetable intake likely reflects the leaders' increased confidence in eating more fruits and vegetables.

Finally, with regard to smoking susceptibility, of the six leaders who had been classified as susceptible to smoking before the start of the intervention, two leaders were classified as non-susceptible by the end of the intervention. Though the numbers are small, this decrease in susceptibility to future tobacco use is noteworthy – especially for the two individuals who may never choose to experiment with smoking. This way of assessing smoking susceptibility was extended to include chewing tobacco. It is important to note that there has not been previous research establishing the reliability or predictive validity of this method as it relates to chewing tobacco. Nonetheless, susceptibility to chewing tobacco was interpreted. Of those leaders who had not tried chewing tobacco ( $n = 31$ ) only one leader was classified as susceptible to future chewing tobacco use. After the intervention, that leader was classified as non-susceptible; however, two leaders who were previously non-susceptible were classified as susceptible at the end of the intervention.

#### *Leadership Skills, Leadership Self-Efficacy, and Goal Setting Confidence*

Before the start of the intervention, the high school students chosen to participate in the program were taught important aspects of leadership during a two-day training session. The high school students learned about effective communication, how to manage a classroom, how to engage others, and how to encourage and facilitate discussion. Leaders were then given the opportunity to practice these skills throughout the eight-week program. Not only did leaders learn about leadership, they also learned to lead.

Leadership development is contingent upon the exercise of newly acquired leadership skills (Komives et al., 2006; MacNeil, 2006; Ricketts & Rudd, 2002; Van Linden & Furtman, 1996). This opportunity to practice leadership skills also functioned to provide high school leaders with potential mastery experiences. They were able to try out their leadership skills and perhaps build their belief in their ability to communicate, manage a classroom, encourage discussion, and connect with younger students. Thus, it was hypothesized that leaders' perceptions of their leadership skill and leadership self-efficacy would increase from pre- to post- intervention. As expected, leaders reported a significant increase in their perceptions of leadership skill and their leadership self-efficacy. Leaders rated their leadership self-efficacy after the intervention as very high ( $M = 4.7$  of 5). Such increases in self-efficacy to lead have significant implications for future leadership behavior. It is difficult to determine, however, if leaders in fact experienced a shift in their beliefs about their ability to lead, or perhaps social desirability or demand characteristics were at play resulting in over-reporting one's leadership self-efficacy. Goal setting was also a key component of the LIFT+ program. Leaders teach program participants how to set and achieve goals and emphasize the importance of having goals. As expected, leaders reported a significant increase in their goal setting confidence. This means that leaders are setting more goals in the different areas of their life and feeling more confident in developing and following through with a plan to reach those goals.

Howard (1982) draws attention to response shift bias as a potential threat to internal validity for studies measuring pre- post- change. To account for this potential

bias, he suggests an alternative method to measure change. Following his recommendation, retrospective baseline scores, collected at the time of post-test, were used in the analyses. A comparison of retrospective baseline and baseline evaluations revealed potential response-shift bias. Leadership self-efficacy and goal setting scores at baseline were significantly higher than the retrospective baseline scores collected at post-test. Although not statistically significant, scores on perception of leadership skills collected at baseline were also higher than retrospective baseline scores. Such findings suggest a shift in leaders' understanding of leadership and goal setting. After learning about leadership and practicing leadership leaders' understanding about what it means to be a leader changes and their self-evaluations reflect this change. It is important to note that the main outcomes were significant using both pre-test and retrospective pre-test data. Results from the current study support the notion of response shift bias and highlight the importance of alternative methods of measurement.

To strengthen self-report measures, peer and teacher evaluations of observed leadership behavior were collected. Teachers were asked to note the degree to which LIFT+ leaders' demonstrated particular leadership behaviors in their classrooms pre- and post- intervention. In other words, to what extent do leadership behaviors learned during the intervention generalize to the classroom setting. Teachers' ratings of leadership behavior were not correlated with students' perceptions of their leadership behavior at either time point. This suggests that while the peer-leaders perceived themselves as more able to lead, this behavior did not necessarily translate to the classroom setting or at least was not evident to teachers. With regard to peer evaluations, however, there was a

significant moderate positive correlation between peer evaluations of leadership behavior and the leaders' evaluations of their leadership behavior. As mentioned previously, there may have been a tendency for leaders to over-report their perceived leadership ability. Interestingly, leaders' rated themselves and their peers quite favorably while teacher ratings at post-test painted a slightly different picture; the mean score for perceived leadership skill was 6.2 out of 7, the mean score for peer evaluations of leadership behavior was 4.6 out of 5, and the mean score for teacher observations of leadership behavior was 3.6 out of 5. Thus, it appears that students overestimated their leadership abilities, peers less so, and teachers even less so. It can be argued that some overestimation of ability can be useful and is preferred to an underestimation of ability (Pajares & Miller, 1994). However, others caution against miscalibrations between efficacy and performance (Klassen, 2007).

#### *Leadership Self-Efficacy, Intentions to Lead, and Positive Experience*

Mastery experiences function to build self-efficacy (Bandura, 1994). Participation in the LIFT+ program can be viewed as an opportunity for leaders to practice and gain confidence in their ability to take on a leadership role. Given this opportunity, it was hypothesized that the leadership self-efficacy would be positively correlated with the degree to which leaders experienced the program as positive. While a positive experience does not necessarily denote a mastery experience, it can be argued that positive experience is important in increasing self-efficacy. Results indicate a significant moderate positive correlation between self-efficacy at post-test and the degree to which leaders reported the experience as positive.

Leadership self-efficacy has important implications for intentions to pursue future leadership opportunities (Bulgar & Mellor, 1997). After participating in the program, it would be the hope that leaders would feel confident in their leadership abilities and, consequently, continue to pursue future leadership opportunities. Based on theory, it was hypothesized that leadership self-efficacy and intention to pursue future leadership opportunities would be positively related. As expected, leadership self-efficacy was significantly positively correlated with leaders' intentions to pursue future leadership opportunities. This finding is consistent with literature that suggests a strong belief in one's ability to lead, make an impact, and help others set and achieve goals functions as a powerful motivator for the pursuit of future leadership opportunities (Giles & Eyler, 1994).

#### *Perceptions of Program*

Results suggest a number of benefits experienced by the leaders. Also notable are the leaders' perceptions of the program. The majority of leaders (89.7%) reported that they considered their experience with LIFT+ as positive. Leaders also reported that they learned from the program (82%) and intended to pursue future leadership opportunities (74.4%). This further underlines the value of peer-led initiatives, such as LIFT+. Associating participation in the LIFT+ program as a positive experience may shape expectations related to future encounters with leadership roles.

#### *Final Thoughts*

LIFT+ was not designed with leadership development in the foreground, yet results reveal valuable benefits to leaders participating in the program. Incorporating aspects from leadership development literature with peer-led health promotion programs can further enhance the development of youth peer leadership identity as it did in the present study. Youth leadership development literature highlights the importance of self-awareness in the creation of a leadership identity (Mohammed & Wheeler, 2001; Nagle, 2003; van Linden & Fertman, 1998). This means that individuals must identify themselves as leaders and become aware of the leadership role they are about to take on. As the high school students participate in leader training and learn the tasks involved in teaching the LIFT+ workshops, this important aspect of leadership identity development may be implicitly assumed. The integral role leaders played in ensuring the success of the LIFT+ program could be more explicitly emphasized. Further, given that reflection plays a key role in the process of identity development (Youniss et al., 1999; Youniss & Yates, 1997), several models of youth leadership development stress the value of reflection and discussion in increasing one's self-awareness as leader. Therefore, leaders could be provided with the space to discuss what leadership means to them, share their previous leadership experiences, and their thoughts about themselves as leaders. Youth leaders, like those who participated in the LIFT+ program, would also benefit from a discussion about the potential they have in shaping the decisions that young people make about their health. However, perhaps even more important, youth leaders need to understand how they are contributing to the development of a competent community. A discussion about the importance of their role might serve to increase leaders' excitement and commitment



to the program. It is imperative that leaders feel connected and invested in what they are teaching. If leaders feel strongly about the importance of the content they are able to convey messages more convincingly about the need to make healthy life choices. A reflection session with leaders at the end of the program would provide a forum for leaders to share their leadership experiences, discuss their thoughts about what they learned, and offer their opinions about the program. Leaders might also engage in reflective exercises that aim to help them integrate and find meaning in their experiences. For example, in a study of the effects of a peer-led tutoring program, high school students were asked to keep a journal and record their thoughts as they tutored middle school students. Journals revealed increased self-awareness and feelings of competence (Sprinthall & Scott, 1989). Journaling facilitated high school students in reflecting on the meaning of their service.

Other researchers point to the value of providing youth with opportunities to assert their voices, share their opinions and ideas, and participate in decision making (DesMarais, Yang, & Farzanehki, 2000; McLaughlin, 2000). While the LIFT+ program is standardized, future programs might find ways for leaders to share their thoughts about content and the best ways to relay and teach information. A final component that may help to increase leader benefits is continual feedback about their performance in the classroom. Such feedback would highlight leaders' strengths and areas for improvement and would help them to refine their leadership skills. In summary extending the leadership section of LIFT+, to include discussion, reflection, feedback, and decision

making, would help the high school students chosen to participate in the program identify and better appreciate their role as leaders.

#### *Limitations, Implications, and Future Directions*

LIFT+ was not designed to function as a leadership development program (though leadership is emphasized), and as a result, there are a number of limitations to the current study. The first limitation is a lack of control or comparison group. Without a comparison group, it is difficult to attribute changes in the participants to their involvement in the intervention. Also, although we provided guidelines, leaders were ultimately chosen based on criteria established by the school. As a result, there may be different criteria for the selection of leaders based on the school. Baseline measures assessing pre-existing differences between the leaders were limited. Consequently, previous leadership experiences, the degree to which the leader is interested in the program, and other personality factors that may influence their experience as leaders for this intervention could not be controlled for.

Validity of measures was another limitation in this study. Assessing youth leadership is difficult as there is a lack of available validated measures. For the study of youth leadership to progress, it is important that future studies focus on the development of valid measures. Furthermore, self-efficacy measures are highly domain and context specific and, in many cases, are tailored to specific populations (Maibach & Murphy, 1995). As a result, measuring leadership self-efficacy required the creation of a new measure. The validity of this new measure needs to be examined. The measures assessing confidence in perceived leadership skills and goal setting have been used in prior studies;

however, the validity for each measure has yet to be evaluated. Finally, single item measures were used to evaluate interest in following nutritional guidelines, confidence in eating more fruits and vegetables, and perceptions of the program. It is recommended that future studies use multi-item scales to measure constructs as single item measures introduce error and the reliability and validity of such measures cannot be determined.

The limited variability and high mean scores of confidence in eating more fruits and vegetables at baseline left little room for improvement and made it difficult to identify significant changes across time points. Additionally, high mean scores in positive LIFT+ experience and leadership self-efficacy signified limited variability in scores and perhaps reflected social desirability or demand bias.

Partnering with the school's nursing class might also be viewed as a limitation as the students were required to participate. As a result, several students may not have been interested in participating and may not view the content of the intervention as important. This may have affected the quality of teaching and engagement in the program.

Despite these limitations, the current study has significant value. LIFT+ is a program that builds leadership and connections with community. It promotes healthy life choices and emphasizes the importance of creating and working towards personal goals. Highlighting the benefits for leaders (in addition to participant benefits) helps to strengthen support for the LIFT+ program specifically and for peer-led programs more generally. Results from the current study suggest that peer-led interventions effectively function as a means to enhance leadership development which directly contributes to the development of competent communities. Furthermore, tobacco use and poor diet remain

the top two causes of preventable deaths in the U.S. These unhealthy habits are prevalent among adolescents. Participation in the LIFT+ program increased leaders' interest in following nutritional guidelines and self-reported fruit and vegetable intake. Thus, there are important health benefits associated with participation in the program. Taken together, results of the current study can be presented to support the merit of peer-led initiatives and garner support for their implementation.

Future initiatives should focus on both on the participants and leaders to maximize the beneficial effects of peer-led programs. Incorporating a stronger leadership development component into programs such as LIFT+ would be valuable. It is important that future studies address the logistical restrictions that often accompany such large scale prevention efforts. To effectively implement LIFT+ several practical issues had be addressed. These included availability of transportation, coordination of elementary and high school schedules, and administrative support. Future studies might focus on finding creative ways to work around such restraints. For example, the program could be offered as an after school workshop. There should be clear criteria for leader selection and participation in the program should be voluntary. A leader application process is advised to ensure leader engagement and commitment. Finally, future studies should aim to address the limitations described in this study. Specifically, researchers should employ control group methodology and multi-item measures to evaluate constructs of interest. Collecting data at a third time point may function to reduce social desirability or demand bias; a social desirability scale could also be included in the measures. Future studies

should also consider collecting behavioral data as self-efficacy does not necessarily denote behavior.

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## Appendix A

### **Susceptibility to Tobacco Use, Self-Efficacy to Resist and Avoid Tobacco Use, & Nutrition**

For each of the next questions, please mark the answer that best describes what you think you would do.

1	2	3	4
Definitely Not	Probably Not	Probably Yes	Definitely Yes

- 37. Do you think that you will smoke a cigarette soon?
- 38. Do you think you will smoke a cigarette in the next year?
- 39. Do you think that in the future you might experiment with cigarettes?
- 40. If one of your best friends were to offer you a cigarette, would you smoke it?
- 41. Do you think that you will use chewing tobacco/snuff soon?
- 42. Do you think you will use chewing tobacco/snuff in the next year?
- 43. Do you think that in the future you might experiment with chewing tobacco?
- 44. If one of your best friends were to offer you chewing tobacco/snuff, would you smoke it?

Please mark whether you strongly disagree, disagree, are not sure, agree or strongly agree with each of the following statements.

1	2	3	4	5
Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree

- 54. If I did not want to smoke, I could refuse someone's offer of cigarettes or other tobacco products.
- 55. If I decided not to smoke, I am sure I could avoid smoking.

71. How interested are you in following national recommendations for eating fruits and vegetables?

1 Not at all Interested, 2 Somewhat Uninterested, 3 Neither Uninterested nor Interested, 4 Somewhat Interested, 5 Very Interested

72. How confident are you that you could eat more fruits and vegetables each day?

1 Not at all Confident, 2 Somewhat not Confident, 3 Not Sure, 4 Somewhat Confident, 5 Very Confident

## Appendix B

### Pre-Test Leadership Survey

**Section A.** Think about times when you have worked with other people in a group. This group could be a club, a sports team, a class, a scout troop, a church group, etc.

Circle to indicate how much you agree or disagree with each statement below.

1 Strongly Disagree - 2 Moderately Disagree - 3 Mildly Disagree - 4 Neither Agree nor Disagree - 5 Mildly Agree - 6 Moderately Agree - 7 Strongly Agree

1. I am good at helping other people set goals for themselves
2. I am good at building the confidence of other people so that they can reach their goals.
3. I am good at helping other people to develop a plan to reach their goals.
4. I am good at helping other people to follow through with the plan they have made to reach their goals.
5. I am good at encouraging other people to share what they have learned.
6. I am good at helping other people to express their ideas.
7. I am good at speaking in front of other people.
8. I am good at expressing my opinions to other people when I believe they are important.
9. I am good at explaining things that other people may not know.
10. I am good at listening to other people's ideas.
11. I am good at giving other people a chance to speak and share their ideas.
12. I am good at organizing what I want to accomplish.
13. I am good at being the one to ask other people to do specific tasks.
14. I am good at getting other people to understand my ideas.
15. I am good at leading a group of people.
16. I am good at getting other people to talk about their ideas.

**Section B.** Think about how you go about doing things in your own life.

Circle to indicate how much you agree or disagree with each statement below.

1 Strongly Disagree - 2 Moderately Disagree - 3 Mildly Disagree - 4 Neither Agree nor Disagree - 5 Mildly Agree - 6 Moderately Agree - 7 Strongly Agree

1. I set goals for myself often.
2. I am good at setting goals for myself.
3. I am good at developing a plan to reach goals that I have set for myself.
4. I am good at following through with a plan to reach goals that I have set for myself.
5. I set goals for myself in many different areas in my life

**Section C.**

1. If you have a goal that you have set for yourself, please list that goal:

**Section D.** Below are statements relating to your beliefs about your ability to work with other people in a group. This group could be a club, a sports team, a class, a scout troop, a church group, etc.

Circle to indicate how much you agree or disagree with each statement below.

1	2	3	4	5
Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree

1. I am sure that I can help other people develop a plan to reach their goals.
2. I am sure that I can lead a group of people.
3. I am sure that I can listen to other people's ideas.
4. I am sure that I can be a good leader.



## Appendix C

### Post-Test Leadership Survey

**Section A.** Think about times when you have worked with other people in a group. This group could be a club, a sports team, a class, a scout troop, a church group, etc.

Circle to indicate how much you agree or disagree with each statement below.

Important Directions! Please Read!

Each of the statements below is written twice.

For the first statement (A) circle to indicate how much you agree or disagree with the statement NOW. For the second statement (B), think about yourself and your leadership skills just before you started as a

LIFT + leader. Looking back, how would you have evaluated yourself and your leadership skills as they were THEN, just before you started as a LIFT+ leader? Circle your choice.

1 Strongly Disagree - 2 Moderately Disagree - 3 Mildly Disagree - 4 Neither Agree nor Disagree - 5 Mildly Agree - 6 Moderately Agree - 7 Strongly Agree

1.     A. (Now) I am good at helping other people set goals for themselves.  
       B. Before I started I was good at helping other people set goals for themselves.
2.     A. (Now) I am good at building the confidence of other people so that they can reach their goals.  
       B. Before I started I was good at building the confidence of other people so that they can reach their goals.
3.     A. (Now) I am good at helping other people to develop a plan to reach their goals.  
       B. Before I started I was good at helping other people to develop a plan to reach their goals.
4.     A. (Now) I am good at helping other people to follow through with the plan they have made to reach their goals.  
       B. Before I started I was good at helping other people to follow through with the plan they have made to reach their goals.

5. A. (Now) I am good at encouraging other people to share what they have learned.  
B. Before I started I was good at encouraging other people to share what they have learned.
6. A. (Now) I am good at helping other people to express their ideas.  
B. Before I started I was good at helping other people to express their ideas.
7. A. (Now) I am good at speaking in front of other people.  
B. Before I started I was good at speaking in front of other people.
8. A. (Now) I am good at expressing my opinions to other people when I believe they are important.  
B. Before I started I was good at expressing my opinions to other people when I believe they are important.
9. A. (Now) I am good at explaining things that other people may not know.  
B. Before I started I was good at explaining things that other people may not know.
10. A. (Now) I am good at listening to other people's ideas.  
B. Before I started I was good at listening to other people's ideas.
11. A. (Now) I am good at giving other people a chance to speak and share their ideas.  
B. Before I started I was good at giving other people a chance to speak and share their ideas.
12. A. (Now) I am good at organizing what I want to accomplish.  
B. Before I started I was good at organizing what I want to accomplish.
13. A. (Now) I am good at being the one to ask other people to do specific tasks  
B. Before I started I was good at being the one to ask other people to do specific tasks.
14. A. (Now) I am good at getting other people to understand my ideas.  
B. Before I started I was good at getting other people to understand my ideas.
15. A. (Now) I am good at leading a group of people.  
B. Before I started I was good at leading a group of people.
16. A. (Now) I am good at getting other people to talk about their ideas.  
B. Before I started I was good at getting other people to talk about their ideas.

**Section B.** Think about how you go about doing things in your own life.

Circle to indicate how much you agree or disagree with each statement below.

Reminder: For statement (A) think about your skills now. For statement (B) think about how you would have evaluated yourself before the start of the program.

1 Strongly Disagree - 2 Moderately Disagree - 3 Mildly Disagree - 4 Neither Agree nor Disagree - 5 Mildly Agree - 6 Moderately Agree - 7 Strongly Agree

1. A. (Now) I set goals for myself often.  
B. Before I started I set goals for myself often.
2. A. (Now) I am good at setting goals for myself.

- B. Before I started I was good at setting goals for myself.
3. A. (Now) I am good at developing a plan to reach goals that I have set for myself.  
B. Before I started I was good at developing a plan to reach goals that I have set for myself.
  4. A. (Now) I am good at following through with a plan to reach goals that I have set for myself.  
B. Before I started I was good at following through with a plan to reach goals that I have set for myself.
  5. A. (Now) I set goals for myself in many different areas in my life.  
B. Before I started I set goals for myself in many different areas in my life.

### Section C.

1. If you have a goal that you have set for yourself, please list the goal and your progress on reaching the goal.

**Section D.** Below are statements relating to your beliefs about your ability to work with other people in a group. This group could be a club, a sports team, a class, a scout troop, a church group, etc.

**Important Directions! Please Read!**

Each of the statements below is written twice.

For the first statement (A), think about the NEXT TIME you will work with people in a group. For the second statement (B), think about your beliefs about your ability to work with other people in a group, just before you were a LIFT + leader. Looking back, how would you have evaluated your beliefs THEN, just before you started as a LIFT+ leader?

Circle your choice.

1	2	3	4	5
Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree

1. A. I am sure that I will be able to help other people develop a plan to reach their goals.  
B. Before I started, I was sure that I could help other people develop a plan to reach their goals.
2. A. I am sure that I will be able to lead a group of people.  
B. Before I started, I was sure that I could lead a group of people.
3. A. I am sure that I will be able to listen to other people's ideas.  
B. Before I started, I was sure that I could listen to other people's ideas.
4. A. I am sure that I will be able to be a good leader.  
B. Before I started, I was sure that I could be a good leader.

**Section E.** Think about your experience as a LIFT+ leader.

Circle to indicate how much you agree or disagree with each statement below.

1 Strongly Disagree - 2 Moderately Disagree - 3 Mildly Disagree - 4 Neither Agree nor Disagree - 5 Mildly Agree - 6 Moderately Agree - 7 Strongly Agree

1. I intend to pursue future leadership opportunities.
2. I learned from my experience as a LIFT+ leader.
3. My experience as a LIFT+ leader was positive.

## Appendix D

### Peer Evaluation of Leadership Behavior

Think about times you have observed your co-leader during the LIFT+ program.

Circle to indicate the extent to which you have observed the described behaviors.

1	2	3	4	5
Never	Almost Never	Sometimes	Almost Always	Always

1. My co-leader helped other people set goals for themselves.
2. My co-leader built the confidence of other people so that they could reach their goals.
3. My co-leader helped other people to develop a plan to reach their goals.
4. My co-leader helped other people to follow through with the plan they had made to reach their goals.
5. My co-leader encouraged other people to share what they had learned.
6. My co-leader helped other people to express their ideas.
7. My co-leader spoke in front of other people.
8. My co-leader expressed his/her opinions to other people when he/she believed that they were important.
9. My co-leader explained things that other people may not have known.
10. My co-leader listened to other people's ideas.
11. My co-leader gave other people a chance to speak and share their ideas.
12. My co-leader organized what he/she wanted to accomplish.
13. My co-leader was the one to ask other people to do specific tasks.
14. My co-leader got other people to understand his/her ideas.
15. My co-leader led a group of people.
16. My co-leader got other people to talk about their ideas

## Appendix E

### Teacher Evaluation of Leadership Behavior

Think about the times you have observed this student in your class (prior to his/her participation in the LIFT+ program).

Please read the following statements and circle to indicate the extent to which you observe the described behaviors. Please answer to the best of your ability.

1	2	3	4	5
Never	Almost Never	Sometimes	Almost Always	Always
1.	The student helps other people to express their ideas.			
2.	The student speaks in front of other people.			
3.	The student expresses his/her opinions to other people when he/she believes they are important.			
4.	The student explains things that other people may not know.			
5.	The student listens to other people's ideas.			
6.	The student organizes what he/she wants to accomplish.			
7.	The student gets other people to understand his/her ideas.			

## VITA

Kathryn Conley was born in Hartford, CT, where she lived for a short time with her parents, Colleen and Randy Conley. Her family re-located to California where she grew up with her younger sister, Andrea Conley, and parents. She graduated from Menlo High School in 2001 and attended Emory University where she majored in psychology. She was a collegiate athlete playing volleyball for four years. She graduated in 2005 with a Bachelor of Arts Degree. She then moved to New York City where she worked full-time for a nonprofit organization and attended classes at Columbia University Teachers College. She graduated in 2006 with a Master of Arts in psychology. In 2007, Kathryn was admitted to the Counseling Psychology Doctoral Degree Program at Virginia Commonwealth University. She is currently working towards her doctorate in Counseling Psychology.